


Family list

1 application(s) for: **JP11308065 (A)**

 **METHOD AND DEVICE FOR ADJUSTING FREQUENCY OF CRYSTAL RESONATOR**
Inventor: MIYAJIMA HIROO ; ASUKE SHINTARO (+1) **Applicant:** SEIKO EPSON CORP
EC: **IPC:** *H01L21/302; H03H3/04; H01L21/02;* (+3)
Publication **JP11308065 (A)** - 1999-11-05 **Priority Date:** 1998-04-23
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METHOD AND DEVICE FOR ADJUSTING FREQUENCY OF CRYSTAL RESONATOR

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Inventor(s): MIYAJIMA HIROO; ASUKE SHINTARO; YAMAZAKI TADASHI +

Applicant(s): SEIKO EPSON CORP +

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- international: **H01L21/302; H03H3/04; H01L21/02; H03H3/00;** (IPC1-7): H03H3/04; H01L21/302

- european:

Application number: JP19980113942 19980423

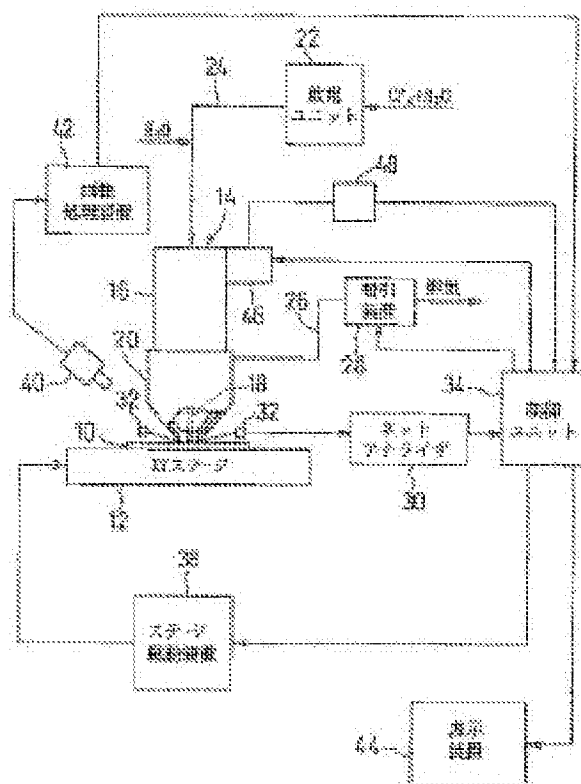
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JP3726488 (B2)

Abstract of JP 11308065 (A)

PROBLEM TO BE SOLVED: To easily adjust frequency in atmospheric pressure. **SOLUTION:** In a crystal wafer 10, a 1st resonator chip is arranged at a working position by an XY stage 12. An image processor 42 inputs to a control unit 34 that the chip is set to the working position from an image-pickup image of a positioning camera 40. A processing unit 14 makes a jetting nozzle 18 spray reaction gas from a discharging unit 22 to the wafer 10, an absorption nozzle 20 absorbs jetted reaction gas and locally etches the crystal wafer.; The unit 34 controls the position of the unit 14 via a drive mechanism 46, based on a detection signal of a position sensor 48, makes the unit 14 move and etch crystal, stops the etching of the wafer 10 when an oscillation frequency detected by a net analyzer 30 becomes a reference value, feeds the stage 12 by a prescribed pitch and sets the next chip to the working position.



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(54) 【発明の名称】 水晶振動子の周波数調整方法および装置

